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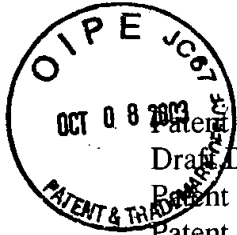
File No. 30-0547

Dispatch No. 13092411

1/

Dispatch Date: September 24, 2003

NOTIFICATION OF REASONS FOR REJECTION



| | |
|-------------------------|------------------------------------|
| Patent Application No.: | Patent Application No. 2000-375939 |
| Draft Date: | August 28, 2003 |
| Patent Office Examiner: | Kazuya Tanada 9361 4L00 |
| Patent Applicant: | Murata Manufacturing Co., Ltd. |
| Applicable Sections: | Section 29 (2) |

The present application should be rejected for the following reasons. If you have an opinion concerning this, please submit a statement of opinion within 60 days of the date of dispatch of this notification.

Reasons

1. The inventions claimed in the following claims of the present application are inventions that could easily have been invented prior to the filing of the application by a person having an ordinary knowledge of the technical field to which the inventions belong on the basis of inventions described in the following publications, which were disseminated in Japan or in foreign countries prior to the filing of the application. Thus, in accordance with the provisions of Section 29 (2) of the Patent Law, these inventions cannot be patented.

Note (For cited references, etc., see the Table of Cited References, etc.)

○ Regarding Reason 1

- Claims 1 through 3 and 6 through 9: Cited Reference Nos. 1 and 2
- Remarks:

[Claims 1 through 3]

Cited Reference 1 describes a capacitor in which a material having a high dielectric constant is formed after forming an oxidation film by oxidizing a Ti thin film. The invention described in this reference differs from the present invention in that the lower electrode consists of a single layer of Ti. However, as is also described in Cited Reference 2, constituting the lower electrode of a capacitor in which an Al film is present beneath the Ti layer is universally known. Therefore, a person skilled in the art could easily envision the application of this universally known structure to the capacitor described in Cited Reference 1, thus constituting the present invention.

[Claims 6 through 8]

In the invention described in Cited Reference 1, heating a Ti thin film in an oxygen atmosphere or in an oxygen plasma as a method for oxidizing this Ti thin film is a universally known technique. Therefore, applying this universally known technique when implementing the technique described in Cited Reference 1 is a matter within a range of things that could easily be devised by a person skilled in the art.

[Claim 9]

No particular difference or difficulty is recognized in the application of the techniques

[Stamp: 9/25/03, [Illegible name/initials]]

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described in Cited References 1 and 2 to a microwave monolithic circuit.

Table of Cited References, etc.

1. Japanese Patent Application Kokai No. H07-161833
2. Japanese Patent Application Kokai No. H03-203261

With regard to the inventions claimed in claims other than those indicated in this Notification of Reasons for Rejection, no reasons for rejection have been discovered at this time. If reasons for rejection are newly discovered, you will be notified of these reasons for rejection.

Record of Results of Survey of Prior Art References

- Field surveyed: IPC 7th Edition
 H 01 L 21/822
 H 01 L 27/04
 H 01 L 27/10

This record of the results of a survey of prior art references does not constitute any reason for rejection.

拒絶理由通知書

特許出願の番号 特願2000-375939
起案日 平成15年 8月28日
特許庁審査官 棚田 一也 9361 4L00
特許出願人 株式会社村田製作所 様
適用条文 第29条第2項

この出願は、次の理由によって拒絶をすべきものである。これについて意見があれば、この通知書の発送の日から60日以内に意見書を提出して下さい。

理 由

1. この出願の下記の請求項に係る発明は、その出願前日本国内又は外国において頒布された下記の刊行物に記載された発明に基いて、その出願前にその発明の属する技術の分野における通常の知識を有する者が容易に発明をすることができたものであるから、特許法第29条第2項の規定により特許を受けることができない。

記 (引用文献等については引用文献等一覧参照)

○理由1について

- ・請求項1～3, 6～9: 引用文献No. 1～2
- ・備考

[請求項1～3]

引用文献1には、Ti薄膜を酸化して酸化膜を形成した後、高誘電率材料を形成したキャパシタが記載されている。同文献に記載のものは、下側電極がTiの単層からなる点で本発明と相違するが、引用文献2に記載されているようにTi層の下にAl膜を有するキャパシタの下側電極は周知の構造であり、該周知の構造を引用文献1に記載のキャパシタに適用し、本発明を構成することは当業者が容易に想到し得たことである。

[請求項6～8]

引用文献1に記載のものにおいて、Ti薄膜の酸化方法として酸素雰囲気または酸素プラズマ中で加熱することは周知技術であり、引用文献1に記載の技術を実施する際に該周知技術を適用することは当業者が容易になし得た範囲内のことである。

[請求項9]

引用文献1乃至2に記載の技術を、マイクロ波モノリシック回路に適用するこ

とに格別な相違も困難性も認められない。

引用文献等一覧

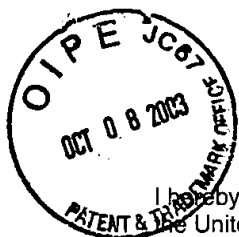
1. 特開平07-161833号公報
2. 特開平03-203261号公報

この拒絶理由通知書中で指摘した請求項以外の請求項に係る発明については、現時点では、拒絶の理由を発見しない。拒絶の理由が新たに発見された場合には拒絶の理由が通知される。

先行技術文献調査結果の記録

- ・調査した分野 I P C 第 7 版
 H 0 1 L 2 1 / 8 2 2
 H 0 1 L 2 7 / 0 4
 H 0 1 L 2 7 / 1 0

この先行技術文献調査結果の記録は、拒絶理由を構成するものではない。



Certificate of Mailing

I hereby certify that this correspondence is being deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to the: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

Date: October 7, 2003

Christine M. Spivey

PATENT
36856.833

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

| | |
|---|--------------------------|
| Applicant: Hidefumi NAKATA | Art Unit: 2815 |
| Serial No.: 09/989,962 | |
| Filed: November 21, 2001 | Examiner: J. Diaz |
| Title: MIM CAPACITOR AND MANUFACTURING METHOD THEREFOR | |

INFORMATION DISCLOSURE STATEMENT

Mail Stop DD
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

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Dear Sir:

Pursuant to 37 C.F.R. § 1.56, submitted herewith are copies of two (2) references cited in the enclosed Examination Report issued in a corresponding Japanese Patent Application. For the Examiner's convenience, we have enclosed an English translation of the Japanese Examination Report from the corresponding Japanese Patent Application and a completed Form PTO-1449. The statement is not a representation that all of the information cited is necessarily effective as prior art against the application.

I hereby state that each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than 3 months prior to the filing of this statement, and that this is the first citation of these prior art references by a foreign patent office in a counterpart foreign patent application. Accordingly, no fee is necessary for the filing of this statement. Should the Commissioner determine otherwise, the Commissioner is authorized to charge Deposit Account No. 50-1353 for any fee shortages, including the petition fee under 37 C.F.R. § 1.17(p).

Applicant respectfully requests that the disclosed references be made of record in the subject application.

Respectfully submitted,

Date: October 7, 2003

A handwritten signature in black ink, appearing to read "Joseph R. Keating", is written over a horizontal line.

Attorneys for Applicant(s)

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Registration No. 37,368

Christopher A. Bennett
Registration No. 46,710

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(Use as many sheets as necessary)

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| Sheet | 1 | of | 1 |
|-------|---|----|---|

| | |
|------------------------|-------------------|
| Application Number | 09/989,962 |
| Filing Date | November 21, 2001 |
| First Named Inventor | Hidefumi NAKATA |
| Art Unit | 2815 |
| Examiner Name | J. Diaz |
| Attorney Docket Number | 36856.833 |

[illegible][illegible]

Examiner
Signature

Date
Considered

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14.